

**CONTROLLED HYSTERESIS COMPARATOR WITH RAIL-TO-RAIL INPUT**

**ABSTRACT**

[0059] Comparator circuits, including rail-to-rail comparator circuits, can implement inverter structures such as current-starved inverters to provide hysteresis to the comparator's output. For example, a current-starved inverter can have its input driven by the comparator output and add current to the currents produced by the comparator's input stage. The inverter current can be derived from bias sources used to bias the input stage of the comparator so that the inverter current can track the input stage bias currents.